STIC SEARCH

HERTZOG 10/775,066


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=> fil reg
FILE 'REGISTRY' ENTERED AT 13:25:50 ON 21 NOV 2005

=> d his ful

     FILE 'HCAPLUS' ENTERED AT 11:49:45 ON 21 NOV 2005
L1             1 SEA ABB=ON  PLU=ON  US20050177018/PN
                 D SCAN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 11:50:07 ON 21 NOV 2005
L2             1 SEA ABB=ON  PLU=ON  26201-32-1/BI
L3             1 SEA ABB=ON  PLU=ON  26201-32-1/RN
                 D SCAN

     FILE 'HCAPLUS' ENTERED AT 11:51:03 ON 21 NOV 2005
L4          2264 SEA ABB=ON  PLU=ON  L3 OR TITANYL(A)PHTHALOCYANIN? OR
                 C32H16N8OTI
L5            10 SEA ABB=ON  PLU=ON  L4 AND PLASMA?
L6             3 SEA ABB=ON  PLU=ON  L4 AND WASTE?/SC,SX
                 D SCAN
L7             4 SEA ABB=ON  PLU=ON  L4 AND WASTE?
L8             4 SEA ABB=ON  PLU=ON  L6 OR L7
L9           236 SEA ABB=ON  PLU=ON  TITANIUM(A)PHTHALOCYAN?
L10            1 SEA ABB=ON  PLU=ON  L9 AND WASTE?
                 D SCAN
L11            5 SEA ABB=ON  PLU=ON  L10 OR L8
L12         2387 SEA ABB=ON  PLU=ON  L4 OR L9
                 D SCAN L5 HIT
                 D SCAN L11 HIT
L13            2 SEA ABB=ON  PLU=ON  L12 AND (DISINTEGRAT? OR DOCOMPOS?)

                 D SCAN
L14            5 SEA ABB=ON  PLU=ON  L11 OR L13
                 D QUE STAT L14
L15            2 SEA ABB=ON  PLU=ON  L5 AND WASTE?
L16            5 SEA ABB=ON  PLU=ON  L14 OR L15
                 D QUE L16

     FILE 'WPIX' ENTERED AT 12:32:52 ON 21 NOV 2005
L17         1002 SEA ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN? OR TITANIUM(
                 A)PHTHALOCYAN?
L18            2 SEA ABB=ON  PLU=ON  L17 AND PLASMA?
                 D SCAN
L19            1 SEA ABB=ON  PLU=ON  L17 AND WASTE?
                 D SCAN

     FILE 'COMPENDEX' ENTERED AT 12:35:08 ON 21 NOV 2005
L20            0 SEA ABB=ON  PLU=ON  L17 AND PLASMA?
L21            0 SEA ABB=ON  PLU=ON  L17 AND WASTE?
L22            0 SEA ABB=ON  PLU=ON  L20 OR L21

     FILE 'JICST-EPLUS' ENTERED AT 12:35:54 ON 21 NOV 2005
L23            0 SEA ABB=ON  PLU=ON  L17 AND WASTE?
L24            0 SEA ABB=ON  PLU=ON  L17 AND PLASMA?
L25            0 SEA ABB=ON  PLU=ON  L23 OR L24

     FILE 'CERAB' ENTERED AT 12:36:45 ON 21 NOV 2005
L26            0 SEA ABB=ON  PLU=ON  L17 AND WASTE?
L27            0 SEA ABB=ON  PLU=ON  L17 AND PLASMA?
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     FILE 'POLLUAB' ENTERED AT 12:38:35 ON 21 NOV 2005
L28            0 SEA ABB=ON  PLU=ON  L17 AND PLASMA?
L29            0 SEA ABB=ON  PLU=ON  L17 AND WASTE?
L30            1 SEA ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN? OR TITANIUM(
                 A)PHTHALOCYAN?
                 D SCAN
                 D L30

     FILE 'WPIX' ENTERED AT 12:40:06 ON 21 NOV 2005
L31            0 SEA ABB=ON  PLU=ON  L18 AND WASTE?
L32            1 SEA ABB=ON  PLU=ON  L31 OR L19

     FILE 'POLLUAB' ENTERED AT 13:21:53 ON 21 NOV 2005
L33            1 SEA ABB=ON  PLU=ON  L28 OR L29 OR L30

     FILE 'JAPIO' ENTERED AT 13:22:20 ON 21 NOV 2005
L34            2 SEA ABB=ON  PLU=ON  L17 AND PLASMA?
                 D SCAN
L35            0 SEA ABB=ON  PLU=ON  L34 AND WASTE?


     FILE 'HCAPLUS, WPIX, POLLUAB' ENTERED AT 13:25:06 ON 21 NOV 2005
L36            6 DUP REM L16 L22 L25 L27 L32 L33 L35 (1 DUPLICATE REMOVE


=> fil hcap
FILE 'HCAPLUS' ENTERED AT 13:26:08 ON 21 NOV 2005rate


=> d que l16
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  26201-32-1/RN
L4          2264 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3 OR TITANYL(A)PHTHAL
                 OCYANIN? OR C32H16N8OTI
L5            10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 AND PLASMA?
L6             3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 AND WASTE?/SC,SX
L7             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 AND WASTE?
L8             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR L7
L9           236 SEA FILE=HCAPLUS ABB=ON  PLU=ON  TITANIUM(A)PHTHALOCYAN
                 ?
L10            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9 AND WASTE?
L11            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L10 OR L8
L12         2387 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 OR L9
L13            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12 AND (DISINTEGRAT?
                 OR DOCOMPOS?)
L14            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11 OR L13
L15            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND WASTE?
L16            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 OR L15


=> fil compendex
FILE 'COMPENDEX' ENTERED AT 13:26:35 ON 21 NOV 2005

=> d que l22
L17         1002 SEA FILE=WPIX ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN?
                 OR TITANIUM(A)PHTHALOCYAN?
L20            0 SEA FILE=COMPENDEX ABB=ON  PLU=ON  L17 AND PLASMA?
L21            0 SEA FILE=COMPENDEX ABB=ON  PLU=ON  L17 AND WASTE?
L22            0 SEA FILE=COMPENDEX ABB=ON  PLU=ON  L20 OR L21
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=> fil jicst
FILE 'JICST-EPLUS' ENTERED AT 13:26:53 ON 21 NOV 2005

=> d que l25
L17        1002 SEA FILE=WPIX ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN?
                OR TITANIUM(A)PHTHALOCYAN?
L23           0 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  L17 AND WASTE?
L24           0 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  L17 AND PLASMA?
L25           0 SEA FILE=JICST-EPLUS ABB=ON  PLU=ON  L23 OR L24


=> fil cerab
FILE 'CERAB' ENTERED AT 13:27:13 ON 21 NOV 2005

=> d que l27
L17        1002 SEA FILE=WPIX ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN?
                OR TITANIUM(A)PHTHALOCYAN?
L27           0 SEA FILE=CERAB ABB=ON  PLU=ON  L17 AND PLASMA?


=> fil wpix
FILE 'WPIX' ENTERED AT 13:27:53 ON 21 NOV 2005

=> d que l32
L17        1002 SEA FILE=WPIX ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN?
                OR TITANIUM(A)PHTHALOCYAN?
L18           2 SEA FILE=WPIX ABB=ON  PLU=ON  L17 AND PLASMA?
L19           1 SEA FILE=WPIX ABB=ON  PLU=ON  L17 AND WASTE?
L31           0 SEA FILE=WPIX ABB=ON  PLU=ON  L18 AND WASTE?
L32           1 SEA FILE=WPIX ABB=ON  PLU=ON  L31 OR L19


=> fil polluab
FILE 'POLLUAB' ENTERED AT 13:28:06 ON 21 NOV 2005

=> d que l33
L17        1002 SEA FILE=WPIX ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN?
                OR TITANIUM(A)PHTHALOCYAN?
L28           0 SEA FILE=POLLUAB ABB=ON  PLU=ON  L17 AND PLASMA?
L29           0 SEA FILE=POLLUAB ABB=ON  PLU=ON  L17 AND WASTE?
L30           1 SEA FILE=POLLUAB ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN?
                 OR TITANIUM(A)PHTHALOCYAN?
L33           1 SEA FILE=POLLUAB ABB=ON  PLU=ON  L28 OR L29 OR L30


=> fil japio
FILE 'JAPIO' ENTERED AT 13:28:19 ON 21 NOV 2005

=> d que l35
L17        1002 SEA FILE=WPIX ABB=ON  PLU=ON  TITANYL(A)PHTHALOCYAN?
                OR TITANIUM(A)PHTHALOCYAN?
L34           2 SEA FILE=JAPIO ABB=ON  PLU=ON  L17 AND PLASMA?
L35           0 SEA FILE=JAPIO ABB=ON  PLU=ON  L34 AND WASTE?


=> fil hcap wpix jicst japio polluab cerab compendex

FILE 'HCAPLUS' ENTERED AT 13:29:19 ON 21 NOV 2005
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FILE 'WPIX' ENTERED AT 13:29:19 ON 21 NOV 2005

FILE 'JICST-EPLUS' ENTERED AT 13:29:19 ON 21 NOV 2005

FILE 'JAPIO' ENTERED AT 13:29:19 ON 21 NOV 2005

FILE 'POLLUAB' ENTERED AT 13:29:19 ON 21 NOV 2005

FILE 'CERAB' ENTERED AT 13:29:19 ON 21 NOV 2005.

FILE 'COMPENDEX' ENTERED AT 13:29:19 ON 21 NOV 2005

=> d l36 1-6 all

L36 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:735392 HCAPLUS
DN 143:178729
ED Entered STN: 12 Aug 2005
TI Method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**
IN Shen, Yu-Ting; Kuo, Chih-Wei; Lu, Ling; Chen, Chan-Yi; Hsieh, Chang-Lung; Fu, Chi-Ho; Liu, Bun-Ching; Liu, Fu-Chen; Huan, Chen-Lin
PA Taiwan
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A62D003-00
INCL 588314000
CC 60-5 (**Waste** Treatment and Disposal)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005177018	A1	20050811	US 2004-775066	2004 0211

PRAI US 2004-775066 20040211

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005177018	ICM	A62D003-00
	INCL	588314000
US 2005177018	NCL	588/314.000

AB A method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine** (TiOPc) comprises heating a mixture of TiOPc, a vitrifying material and selected **waste** soil to a temperature of 1,220° to 10,000° until the mixture becomes molten lava. The **plasma** breaks down the **titanyl phthalocyanine** and encapsulates the benign products in the lava that is chemical very stable. Since the TiOPc is **disintegrated** completely in the process, the TiOPc no longer represents a threat to the environmental.
ST **plasma disintegrate** hazardous **waste** soil pollution **titanyl phthalocyanine** lava
IT Soil pollution
(control; method of using high temperature **plasma** to

disintegrate waste containing **titanyl phthalocyanine**)
IT Solid **wastes**
(glass; method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Solid **wastes**
(hazardous; method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Environmental pollution control
Hazardous **wastes**
Plasma
(method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Lava
(method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Toxicants
(solid **waste**; method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Hazardous **wastes**
(solid, toxic; method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Hazardous **wastes**
(solid; method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Solid **wastes**
(toxic; method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT Soils
(**waste**; method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)
IT **26201-32-1, Titanyl phthalocyanine**
(method of using high temperature **plasma** to **disintegrate waste** containing **titanyl phthalocyanine**)

L36 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AN 2004:878312 HCAPLUS
DN 141:372892
ED Entered STN: 22 Oct 2004
TI Composites of zinc phthalocyanine and titanium oxide for use in photocatalytic processes
IN Da Hora Machado, Antonio Eduardo
PA Conselho Nacional de Desenvolvimento Cientifico e Tecnologico-CNPQ, Brazil; De Miranda, Jacques Antonio; Sattler, Christian; De Oliveira, Lamark
SO PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM B01J

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 60, 61, 67

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004089525	A2	20041021	WO 2004-BR52	20040408
WO 2004089525	A3	20041118		
BR 2003000920	A	20050517	BR 2003-920	20030411

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI BR 2003-920 A 20030411

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004089525	ICM	B01J

AB The object of this invention are catalysts composites for photochem. processes which aims the environmental decontamination, having a very superior photocatalytic efficiency when compared with the observed for pure titanium oxides. The photocatalytic composites are a combination of TiO2 with a photosensitizer dye, capable to mediate photocatalytic processes using the incident radiation in wavelength ranges incapable to promote the excitation of the pure photocatalyst. This occurs due to the electronic excitation of the dye in these regions of the electromagnetic spectrum. The excited photosensitizer dye promotes electron transfer to the conduction band of the catalyst, providing the photocatalytic action. With this, the **wastewater** treatment with the use of solar radiation becomes interesting, due to the captation of useful photons in a large range of the electromagnetic spectrum and energy conversion from these composites.

ST **wastewater** photocatalytic treatment purifn metal **phthalocyanine titanium** oxide

IT Photolysis catalysts
Wastewater treatment
(composites of zinc phthalocyanine and titanium oxide for use in photocatalytic processes)

IT 13463-67-7, Titanium oxide, uses
(P-25; composites of zinc phthalocyanine and titanium oxide for use in photocatalytic processes)

IT 14320-04-8, Zinc phthalocyanine
(composites of zinc phthalocyanine and titanium oxide for use in photocatalytic processes)

L36 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:647347 HCAPLUS
DN 143:138297
ED Entered STN: 25 Jul 2005
TI Method of using a high temperature **plasma** to **disintegrate** TiOPc organic **waste**
IN Chen, Yu Ting; Guo, Jr-Wei; Lu, Ling; Chen, Jeng-Yi; Shie, Chang-Luen
PA Labeltek Inc., Taiwan; Tai Chan Environmental Technologies Ltd:
SO Taiwan., 8 pp.
CODEN: TWXXA5
DT Patent
LA Chinese
IC ICM A62D003-00
ICS B32B003-00
CC 60-4 (**Waste** Treatment and Disposal)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
TW 225420	B1	20041221	TW 2003-92122695	2003 0819

PRAI TW 2003-92122695 20030819
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
TW 225420	ICM	A62D003-00
	ICS	B32B003-00

AB A high temperature **plasma**, vitrifying materials, and selected **waste** soils are used to **disintegrate** oxotitanium phthalocyanine (TiOPc) **waste** by heating to 1220-10000° to form a chemical stable vitrified material.
ST oxotitanium phthalocyanine **waste** thermal decompn **plasma** vitrification
IT **Plasma**
Thermal decomposition
Vitrification
(high temperature **plasma** to **disintegrate** TiOPc organic **waste**)
IT **26201-32-1**
(high temperature **plasma** to **disintegrate** TiOPc organic **waste**)

L36 ANSWER 4 OF 6 POLLUAB COPYRIGHT 2005 CSA on STN
AN 1999:7194 POLLUAB
TI A new sandwich-type diphthalocyanine as a potential optical transducer for NO sub(2) detection
AU Baldini, F.; Capobianchi, A.; Falai, A.; Pennesi, G.
CS Istituto di Ricerca sulle Onde Elettromagnetiche 'Nello Carrara', IROE-CNR, Via Panciatichi 64, 50127 Firenze, Italy
SO Sensors and Actuators B: Chemical [Sensors Actuators B: Chem.], (19980831) vol. B51, no. 1-3, pp. 176-180.
ISSN: 0925-4005.
DT Journal
FS P
LA English
SL English
AB Bis(**phthalocyaninato**)**titanium**(IV) (Ti(Pc) sub(2)), a sandwich-type metal diphthalocyanine, is used as a

chemical transducer for the optical detection of nitrogen dioxide. The optical properties of this chemical transducer after its immobilization on controlled pore glass (CPG) by a casting from a Ti(Pc) sub(2) solution in alpha -chloronaphthalene are described. This compound is characterized by three well-defined absorption bands in the visible region (lambda = 506, 675 and 720 nm) which undergo spectral changes in the presence of nitrogen dioxide. Two different optodes were manufactured and characterized. A plastic flat reflector is used as a solid support placed in front of an optical fibre bundle, and Ti(Pc) sub(2) is immobilized on CPG that was previously embedded in the plastic reflector either by casting or by sublimation. The characterization of the developed optodes in terms of sensitivity, reversibility and response time is described.

CC 0000 AIR POLLUTION

CT Optical analysis; Absorption; Sensors; Pollution detection; Nitrogen dioxide; diphthalocyanine

L36 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:265892 HCAPLUS

DN 124:297784

ED Entered STN: 07 May 1996

TI Photodestruction of dyes in aqueous suspensions of finely divided semiconductors - **titanyl phthalocyanine** and its derivatives

AU Kuznetsova, N. A.; Slivka, L. K.; Negrimovskii, V. M.; Kaliya, O. L.; Luk'yanets, E. A.

CS Nauchno-Issled. Inst. Org. Poluprod. Krasitelei, Moscow, Russia

SO Zhurnal Obshchei Khimii (1995), 65(12), 2049-52
CODEN: ZOKHA4; ISSN: 0044-460X

PB Nauka

DT Journal

LA Russian

CC 60-2 (**Waste** Treatment and Disposal)
Section cross-reference(s): 40, 74

AB On the example of **titanyl phthalocyanine** and its tetra- and octanitro derivs. it is shown that suspensions of organic semiconductors exhibit photocatalytic activity in oxidation of organic substrates. Using Rhodamine 6Zh as a model substance the oxidative photocatalytic decomposition of water pollutants was studied. It was found that the organic semiconductor systems, in contrast to inorg. systems, are active not only in UV but also in visible light.

ST **titanyl phthalocyanine** catalytic oxidn dye **wastewater**

IT Dyes
(photodestruction of dyes in aqueous suspensions of organic semiconductors)

IT **Wastewater** treatment
(decolorization, photodestruction of dyes in aqueous suspensions of organic semiconductors)

IT **Wastewater** treatment
(oxidation, catalytic, photodestruction of dyes in aqueous suspensions of organic semiconductors)

IT **Wastewater** treatment
(photolysis, catalytic, photodestruction of dyes in aqueous suspensions of organic semiconductors)

IT **26201-32-1, Titanyl phthalocyanine**
104844-29-3 167964-73-0
(photodestruction of dyes in aqueous suspensions of organic

semiconductors)
IT 7325-85-1
(photodestruction of dyes in aqueous suspensions of organic semiconductors)

L36 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:789122 HCAPLUS
DN 123:183536
ED Entered STN: 14 Sep 1995
TI Recording apparatus and recording method
IN Hirano, Hideki; Tomita, Hidemi; Shinozaki, Kenji
PA Sony Corp., Japan
SO Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM B41M005-38
ICS B41M005-40
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 628426	A1	19941214	EP 1994-108892	1994 0609
EP 628426 R: DE, FR, GB	B1	19971229		
JP 07068803	A2	19950314	JP 1993-168697	1993 0614

PRAI JP 1993-168697 A 19930614
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 628426	ICM	B41M005-38
	ICS	B41M005-40
EP 628426	ECLA	B41M005/24; B41M005/38A; B41M005/40F2

AB The recording apparatus comprises a recording part in which a layer of a heat-fusible recording material is formed opposite a recording medium with a gap (d) in between, the recording part being so constructed as to selectively heat the heat-fusible recording material , thereby vaporizing or ablating it, and transfer the vapor to the recording medium through the gap (d), the recording material containing a heat energy absorber which promotes the heating of the recording material. The recording material may contain uniformly dissolved therein a light-heat converting dye which, upon irradiation with light, absorbs the light of specific wavelength and heats the recording dye. The recording apparatus should preferably have a semiconductor to emit laser as an energy source to selectively vaporize or ablate the recording material, and a means to continuously feed the recording medium to the recording part, the recording medium having an image receiving layer which faces, with a gap between, the layer of the recording material in the recording part. The recording dye should preferably contain uniformly dissolved therein a light-heat converting polymeric material which has in the main chains or side chains, or at the terminals a dye segment capable of absorbing the light of specific wavelength which is irradiated to heat the recording dye. This

prevents the vaporization of the dye component capable of absorbing light. The recording material may contain a light-heat converting pigment capable of absorbing the light of specific wavelength irradiated for heating, the pigment being surface-treated for improved dispersion into the recording material. It is desirable that ≥1 of the light-heat converting dye, light-heat converting polymeric material, and light-heat converting pigment be in the state of uniform segregation at the interface between the layer of the recording material and the gap. A recording method comprises transferring the recording material to the recording medium by using the recording apparatus A recording apparatus and recording method assured of high-quality recording with high thermal efficiency, facilitating the reduction in size and in weight, freed of **wastes** such as used ink sheet.

ST recording app thermal vapor transfer

IT Printing, nonimpact
(thermal-transfer, light-heat converting pigment, polymer, or dye for high quality and efficiency)

IT 822-16-2D, Sodium stearate, partially fluorinated, reaction product with cyanine dye NK-125 6408-50-0 9004-57-3D, Ethyl cellulose, reaction product with C.I. Reactive Blue 15 12225-39-7D, C.I. Reactive Blue 15, reaction product with Et cellulose 19764-96-6D, Nk-125, reaction product with partially fluorinated sodium stearate **26201-32-1, Titanyl phthalocyanine** 38621-09-9 97460-97-4 167756-96-9
(light-heat converting pigment, polymer, or dye for high quality and efficiency)